PATENT ABSTRACTS OF JAPAN

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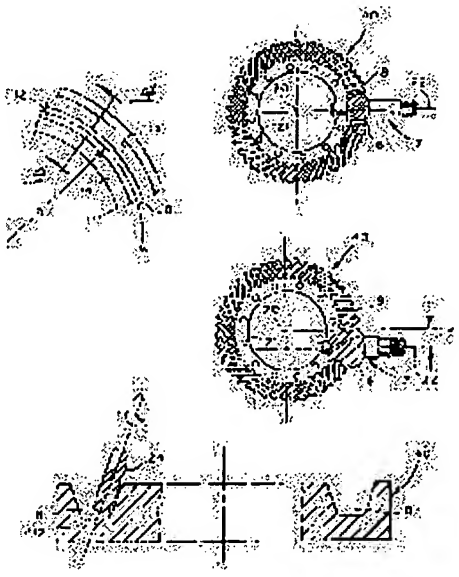
(54) RING GEAR AND ITS MANUFACTURE

(57)Abstract:

PURPOSE: To cut forged and/or rough-cut teeth of a forged ring gear by cutting the teeth by a rotary tool rotating about a central rotational axis that projectionally intersects a bottom surface during tracking along a tool path on the bottom.

CONSTITUTION: By rotating a rotary tool 24 about a rotational axis (r) that projectionally intersects a bottom surface 12 as the rotary tool 24 moves along a tool path (bending course having median curvature radius R) for determining teeth 8 of a ring gear 40, the rotary tool 24 is used to cut the forged and/or rough-cut ring gear 40. The tool 24 may be any type of rotary tool, but a fraise CNC numerically controlled by a computer is used to control motion of the tool 24. This method enables a rotational axis of the tool to be in close proximity to tooth surfaces to be cut, and thereby substantially eliminating microstructure adjustment processes such as an annealing heat treatment before cutting for removing Widmannstatten structure and bainite based ferrite.



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